

A High Order Accuracy Computational Tool for Unsteady Turbulent Flows and Acoustics, Phase II

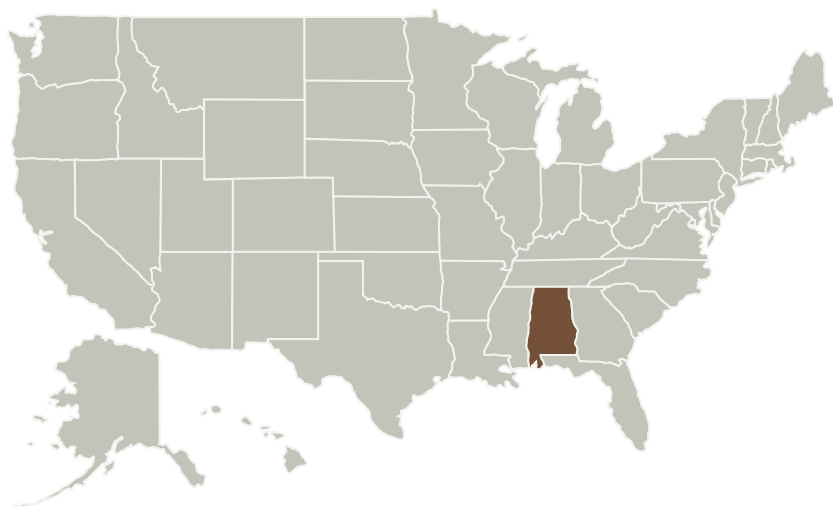
Completed Technology Project (2010 - 2012)



Project Introduction

Accurate simulations of unsteady turbulent flows for aerodynamics applications, such as accurate computation of heat loads on space vehicles as well the interactions between fluids and structures is of utmost importance to the aerospace industry and NASA. Using a Finite Element Framework suited for both fluids and structures, we propose to continue building on the successes of Phase I by adding various turbulence solution methodologies as well additional multi-disciplinary physics to address complex problems with complex geometries, while maintaining high order accuracy of the framework.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Frendi Research Corporation	Supporting Organization	Industry	Madison, Alabama

Primary U.S. Work Locations

Alabama



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX15 Flight Vehicle Systems
 - └ TX15.1 Aerosciences
 - └ TX15.1.3 Aeroelasticity